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This is one of many related papers that were included in the 1955 NMGS Fall Field Conference Guidebook.

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MINERAL DEPOSITS AND MINES IN SOUTH-CENTRAL NEW MEXICO

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SAN ANDRES MOUNTAINS REGION

No major mines are in operation in the area covered by this field conference but there are many occurrences of minerals of economic interest. Sporadic mining activity has occurred from the 1880's to the present time, though the main production was obtained in the Black Range from such districts as Chloride, Hermosa, Kingston, and Hillsboro.

In the San Andres Mountains, covered in the first day of the field trip, there are few known occurrences of minerals of economic importance. A few miles due east of Rhodes Pass is Bearden Canyon in which a number of mineral locations were made during the early days (1890 to 1904). Galena and barite with a little copper and sphalerite were found but very little work was ever done on these claims. The major interest in those days was in gold and silver and and the ores of base metals, and other minerals were more or less ignored unless they contained the precious metals. The ore minerals occur in limestone; barite is always present and fluorite usually so. No production has ever come from the area.

Some ten miles to the northeast of Rhodes Pass is the old mining camp of Pitt, and about eight miles beyond that camp is the Mockingbird Gap district. At Pitt the mineral occurrences contain somewhat more metal than in the Rhodes Pass area, and some directed but unsuccessful effort was made to develop commercial ore bodies. In the Mockingbird Gap district considerable work was done on several excellent showings of fluorite. Good deposits of barite containing some galena also are known in the district. All the deposits mentioned are within the White Sands Proving Grounds and have not been accessible for exploitation for more than ten years. The mineralization in all these areas resembles very closely that of deposits that are presently being worked in the Hansonburg district of the Oscura Mountains about ten miles north of Mockingbird Gap. The minerals occur in a highly silicified limestone, usually along old water channels or in fault zones.

To the south and southwest of Rhodes Pass a few mining claims were located in the late nineties, but no deposits of economic importance were ever found.

SIERRA CUCHILLO REGION

For that part of the field trip between Truth or Consequences and Winston, the principal areas of interest are the Cuchillo Hills, the Winston-Chloride region and the Iron Mountain district. There are four old mining districts in the region and a part of a fifth. The Chloride, Apache, Cuchillo Negro, and Black Range districts are wholly within this part of Sierra County, and the Iron Mountain district straddles the Socorro-Sierra county line. This district, however, is usually thought of as being in Socorro County. The Apache, Cuchillo Negro and Black Range districts are really sub-districts of the Chloride district, and the whole area is generally called the Chloride District. Jahns has described the geology and locale of some of the deposits elsewhere in this book.

Ore was discovered in the old mining camp of Chloride about two miles west of Winston in 1879, and the district has produced almost continuously since that time. Yield has amounted to about $500,000 prior to 1930, and since 1930 about $100,000 has come from many small mines. The Great Republic mine produced most of the ore, but the St. Cloud, Colossal, Fortuna, Ivanhoe, Vindictor and many smaller mines contributed to the overall production. The district has always been considered a gold-silver producer, but copper, lead, zinc, and fluorspar were found also.

In the Chloride district Pennsylvanian and Permian beds are partly covered by volcanic flows and locally are intruded by monzonite porphyry. The ores occur chiefly as vein deposits in the flow rocks and in a general way are of two kinds: gold ores and silver-copper ores. Most of the gold-bearing veins occur in a northward-trending belt which approximately follows the contact between the limestone and the igneous rock. The gangue material is quartz and barite. The silver-copper ores occur in less persistent shear zones with some purple fluorspar. Some of these deposits contain uranium minerals. Uranium has also been found associated with purple fluorspar in veinlets and in some of the siliceous dikes of the area, but no production of consequence has yet been attained.

The placer tin deposits of the Taylor Creek area which are derived from rhyolite, lie just over the summit of the Black Range from the Chloride district.

In the Sierra Cuchillo some copper has been

mined from contact-metamorphic deposits, and deposits of iron ore have been found in the contact zones.

In the Iron Mountain district at the north end of the Cuchillo Mountains are contact deposits which have yielded iron ores, tungsten ore as scheelite, and beryllium ore as helvite. The helvite "ribbon rock" is of unusual interest but yields its content of beryllium only at prohibitive cost.

CABALLO MOUNTAINS REGION

The Caballo Mountains, which occupy the attention of the field conference on the third day have a considerable variety of deposits but little production currently.

The principal minerals in the area near Palomas Gap are fluorspar, lead, copper, and barite, and numerous occurrences of manganese ores are known around the north end of the range. Most of the mining activity in the district was between 1901 and 1914, when the principal ores produced were those of copper and lead. From about 1910 to 1912 lead-vanadium ore was mined near the gap. During World War II the need for base metals and fluorspar brought a short period of activity to the district and recently manganese ore has been sought in the area north of the gap. The Shandon gold placers at the foot of the mountains at Caballo dam have been worked intermittently since 1901. Many of the gulches and arroyos west of the gap contained small gold-bearing placers, most of which have long since been worked out.

Within the past two years reports of uranium discoveries in the Caballo Mountains have been numerous and a large number of mining claims have been recorded. The uranium minerals are reported to occur in seams and slips in the Precambrian granite and to some extent in Cambrian rocks. In spite of much work, no ore shipments of consequence have been made.